

State of New Jersey

Department of Environmental Protection Air Quality Permitting

General Permit

Emergency Generator

This General Permit allows for the construction, installation, reconstruction, modification and operation at no more than 500 hours per year of a single emergency generator, with a maximum gross heat input rate of 15 million BTU per hour (MMBTU/hr) for generators combusting Number 2 Fuel Oil, Diesel or Kerosene, or 40 MMBTU/hr for generators combusting Natural Gas or Propane.

The potential-to-emit (PTE) for the equipment covered under this General Permit shall be established based on the General Permit Number selected on the Registration Form.

I. DEFINITIONS

The terms used in this General Permit shall have the meanings given to them in N.J.A.C. 7:27 et seq.

II. AUTHORITY

This General Permit is issued under the authority N.J.S.A 26:2C-9.2. This General Permit shall allow for inspection and evaluation to assure conformance with all provisions of N.J.A.C. 7:27 et seq. An opportunity for public comment on this General Permit was provided on August 18, 1997.

III. APPLICABILITY

This General Permit is for a single emergency generator which operates no more than 500 hours per year and has a maximum rated capacity (gross heat input) that is less than or equal to **15 MMBTU/hr** (approximately 1.5 Megawatts electrical output) when combusting Number 2 Fuel Oil, Diesel or Kerosene, or that is less than or equal to **40 MMBTU/hr** (approximately 4 Megawatts electrical output) when combusting Natural Gas or Propane.

IV. EXCLUSIONS

The emergency generator covered by this General Permit cannot be used except during periods of involuntary power curtailment, power unavailability, maintenance activity requiring that the main source of power be shut down, or operation for the purpose of testing the generator.

This General Permit cannot be used for emergency generators which combust non-commercial fuels, including used crankcase oil, any other used oil, facility by-products and any type of waste materials. The only commercial fuels that can be combusted under this General Permit are Natural Gas, Propane, Number 2 Fuel Oil, Diesel and Kerosene.

V. EQUIPMENT/CONTROL DEVICE SPECIFICATIONS

The Permittee shall retain on site (for the life of the generator) the maximum BTU rating (maximum gross heat input). Records acceptable to the Department are generator plate ratings, manufacturer's specifications, or engineering calculations.

VI. POTENTIAL TO EMIT

The following Tables provide the Permittee with a potential-to-emit (PTE), in tons per year, for each air contaminant category. The PTE assigned to each generator will correspond to the option selected on the registration form.

OPTION A						
GENERATOR BURNING NUMBER 2 FUEL OIL, DIESEL FUEL, OR KEROSENE						
POTENTIAL TO EMIT (IN TPY) ESTABLISHED BY SELECTING MAXIMUM OIL USAGE						
ASSUMES MAXIMUM GALLONS/YR BURNED IN SELECTED CATEGORY						
General Permit Number	Max Fuel Usage (Gallons per year)	AIR CONTAMINANT				
		Total Suspended Particulates (TSP/PM-10)	Sulfur Dioxide (SO ₂)	Oxides of Nitrogen (NO _x)	Carbon Monoxide (CO)	Volatile Organic Compounds (VOC)
EG-A1	1,000	0.02	0.02	0.30	0.07	0.03
EG-A2	2,000	0.04	0.04	0.60	0.13	0.05
EG-A3	3,000	0.06	0.06	0.90	0.20	0.08
EG-A4	4,000	0.08	0.08	1.20	0.26	0.10
EG-A5	5,000	0.10	0.10	1.50	0.33	0.13
EG-A6	7,500	0.15	0.15	2.25	0.49	0.19
EG-A7	10,000	0.20	0.20	3.00	0.65	0.25
EG-A8	12,000	0.24	0.24	3.60	0.78	0.30
EG-A9	14,000	0.28	0.28	4.20	0.91	0.35
EG-A10	16,000	0.32	0.32	4.80	1.04	0.40

<p style="text-align: center;">OPTION B</p> <p style="text-align: center;">GENERATOR BURNING NATURAL GAS OR PROPANE</p> <p style="text-align: center;">POTENTIAL TO EMIT (IN TPY) ESTABLISHED BY SELECTING MAXIMUM GAS USAGE</p> <p style="text-align: center;">ASSUMES MAXIMUM CUBIC FEET/YR BURNED IN SELECTED CATEGORY</p>						
General Permit Number	Max Fuel Usage (Cubic Feet per year)	AIR CONTAMINANT				
		TSP/PM-10	SO ₂	NO _x	CO	VOC
EG-B1	2,000,000	0.04	0.01	0.45	0.11	0.02
EG-B2	3,000,000	0.06	0.01	0.67	0.17	0.03
EG-B3	4,000,000	0.08	0.02	0.90	0.22	0.04
EG-B4	5,000,000	0.10	0.02	1.12	0.28	0.05
EG-B5	6,000,000	0.12	0.02	1.35	0.34	0.06
EG-B6	7,000,000	0.14	0.03	1.57	0.39	0.07
EG-B7	8,000,000	0.16	0.03	1.80	0.45	0.08
EG-B8	10,000,000	0.20	0.04	2.24	0.56	0.10
EG-B9	12,000,000	0.24	0.05	2.69	0.67	0.12
EG-B10	14,000,000	0.29	0.06	3.14	0.79	0.14
EG-B11	16,000,000	0.33	0.07	3.59	0.90	0.16
EG-B12	18,000,000	0.37	0.07	4.04	1.01	0.18
EG-B13	20,000,000	0.41	0.08	4.49	1.12	0.20

<p style="text-align: center;">OPTION C</p> <p style="text-align: center;">GENERATOR BURNING NUMBER 2 FUEL OIL, DIESEL FUEL OR KEROSENE</p> <p style="text-align: center;">POTENTIAL TO EMIT (IN TPY) ESTABLISHED BY SELECTING SIZE OF GENERATOR AND MAXIMUM HOURS OF OPERATION</p> <p style="text-align: center;">ASSUMES MAXIMUM SIZE GENERATOR IN CATEGORY SELECTED OPERATING FOR THE MAXIMUM HOURS OF OPERATION/YR SELECTED</p>								
General Permit Number	Maximum Heat Input (<u>Million</u> <u>BTU/hr</u>)		Maximum Hours of Operation per Year	AIR CONTAMINANT				
	Greater Than or Equal to	Less than		TSP/PM-10	SO ₂	NO _x	CO	VOC
EG-C1	1	3	500	0.21	0.21	3.17	0.69	0.26
EG-C2	1	3	200	0.08	0.08	1.27	0.27	0.11
EG-C3	1	3	50	0.02	0.02	0.32	0.07	0.03
EG-C4	3	5	450	0.32	0.32	4.75	1.03	0.40
EG-C5	3	5	200	0.14	0.14	2.11	0.46	0.18
EG-C6	3	5	50	0.04	0.04	0.53	0.11	0.04
EG-C7	5	7	300	0.30	0.30	4.44	0.96	0.37
EG-C8	5	7	200	0.20	0.20	2.96	0.64	0.25
EG-C9	5	7	50	0.05	0.05	0.74	0.16	0.06
EG-C10	7	9	250	0.32	0.32	4.75	1.03	0.40
EG-C11	7	9	150	0.19	0.19	2.85	0.62	0.24
EG-C12	7	9	50	0.06	0.06	0.95	0.21	0.08
EG-C13	9	12	200	0.34	0.34	4.90	1.10	0.42
EG-C14	9	12	150	0.25	0.25	3.80	0.82	0.32
EG-C15	9	12	50	0.08	0.08	1.27	0.27	0.11
EG-C16	12	15	150	0.32	0.32	4.75	1.03	0.40
EG-C17	12	15	100	0.21	0.21	3.17	0.69	0.26
EG-C18	12	15	50	0.11	0.11	1.58	0.34	0.13

<p style="text-align: center;">OPTION D GENERATOR BURNING NATURAL OR PROPANE POTENTIAL TO EMIT (IN TPY) ESTABLISHED BY SELECTING SIZE OF GENERATOR AND MAXIMUM HOURS OF OPERATION ASSUMES MAXIMUM SIZE GENERATOR IN CATEGORY SELECTED OPERATING FOR THE MAXIMUM HOURS OF OPERATION/YR SELECTED</p>								
General Permit Number	Maximum Heat Input (<u>Million BTU/hr</u>)		Maximum Hours of Operation per Year	AIR CONTAMINANT				
	Greater Than or Equal to	Less than		TSP/ PM-10	SO ₂	NO _x	CO	VOC
EG-D1	1	10	500	0.10	0.01	1.10	0.28	0.06
EG-D2	1	10	200	0.04	0.00	0.44	0.11	0.02
EG-D3	1	10	50	0.01	0.00	0.11	0.03	0.01
EG-D4	10	20	500	0.20	0.01	2.20	0.55	0.12
EG-D5	10	20	200	0.08	0.01	0.88	0.22	0.05
EG-D6	10	20	50	0.02	0.00	0.22	0.06	0.01
EG-D7	20	30	500	0.30	0.02	3.30	0.83	0.18
EG-D8	20	30	200	0.12	0.01	1.32	0.33	0.07
EG-D9	20	30	50	0.03	0.00	0.33	0.08	0.02
EG-D10	30	40	500	0.40	0.03	4.40	1.10	0.24
EG-D11	30	40	200	0.16	0.01	1.76	0.44	0.10
EG-D12	30	40	50	0.04	0.00	0.44	0.11	0.02

NOTE: Annual emissions listed in Options A, B, C and D were calculated using factors from AP-42, Fifth Edition, Volume 1, Chapter 3.

VII. COMPLIANCE PLAN

The Emergency Generator covered by this General Permit is subject to the applicable requirements listed on the following pages.

COMPLIANCE PLAN: Emergency Generator

Item No	Applicable Requirement	Monitoring Requirement	Record keeping Requirement	Submittal/ Action
1.	Permittee shall not use the equipment in a manner which will cause visible emissions to exceed 20% opacity, exclusive of visible condensed water vapor, for a period of more than 10 consecutive seconds. {N.J.A.C 7:27-3.5}	Permittee shall observe the stack for no visible emissions (exclusive of visible condensed water vapor) once each month if the equipment is used for more than 2 continuous hours during the month. {N.J.A.C 7:27-8.13(d)}	Permittee shall record in either a permanent bound log book or in readily accessible computer memories, that the stack was observed (date and time) and if operation of the equipment causes visible emissions (exclusive of visible condensed water vapor) for a period longer than 10 consecutive seconds. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}	If visible emissions are observed, refer to operator manual for corrective measures and record corrective action. If measures fail to correct visible emissions within 24 hours of observation, report the incident in writing to the Regional Enforcement Office within three working days. {N.J.A.C 7:27-8.13(d)4}
2.	Allowable emission rate for particulates from the combustion of fuel shall be based on heat input rate to the generator. {N.J.A.C 7:27-4.2}	None	None	None

3.	<p>This equipment shall not cause any air contaminant, including an air contaminant detectable by the sense of smell, to be present in the outdoor atmosphere in such quantity and duration which is, or tends to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property, except in areas over which the owner or operator has exclusive use or occupancy. {N.J.A.C 7:27-5}</p>	None	<p>Permittee shall record in either a permanent bound log book or in readily accessible computer memories instances (date and time) when the operation of equipment has the potential to cause off-property effects. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}</p>	<p>Any operation of the equipment which may cause a release of air contaminants in a quantity or concentration which poses a potential threat to public health, welfare, or the environment or which might reasonably result in citizen complaints shall be reported by the Permittee as required by the Air Pollution Control Act. Permittee shall immediately notify the Department of any non-compliance by calling the Environmental Action Hotline at (609)292-7172. {N.J.S.A 26:2C-19(e)}</p>
4.	<p><u>For Options A or B Only</u> Compliance with annual emission limit for each air contaminant (NOx, VOC, CO, SO2, TSP/PM-10) shall be based on the amount of fuel burned per year. Permittee shall comply with annual self imposed fuel limit. {N.J.A.C 7:27-8.13(a)}</p>	<p>Permittee shall install and operate a totalizing fuel flow meter monitoring the total amount of fuel burned per year by the generator. {N.J.A.C 7:27-8.13(d)}</p>	<p>Permittee shall record in either a permanent bound log book or in readily accessible computer memories, fuel type and monthly amount of fuel burned by the generator. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}</p>	<p>Permittee shall report any non-compliance within three working days after the event in writing to the Regional Enforcement Office. {N.J.A.C 7:27-8.13(d)4}</p>
5.	<p><u>For Options C or D Only</u> Compliance with annual emission limit for each air contaminant (NOx, VOC, CO, SO2, TSP/PM-10) shall be based on hours of operation per year. Permittee shall comply with annual self imposed limit on the hours of operation. {N.J.A.C 7:27-8.13(a)}</p>	<p>Permittee shall install and operate a totalizing hour meter monitoring the total hours of operation per year for the generator. {N.J.A.C 7:27-8.13(d)}</p>	<p>Permittee shall record in either a permanent bound log book or in readily accessible computer memories the monthly hours of operation of the generator. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}</p>	<p>Permittee shall report any non-compliance within three working days after the event in writing to the Regional Enforcement Office. {N.J.A.C 7:27-8.13(d)4}</p>

6.	<p>The maximum allowable fuel oil sulfur content is based on the geographic location of a facility. This equipment shall not use fuel oil which has a sulfur content exceeding the following:</p> <p>0.2 % sulfur by wt. if facility is located in Bergen, Burlington, Camden, Essex, Gloucester, Hudson, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset and Union Counties</p> <p>0.3 % sulfur by wt. if facility is located in Atlantic, Cape May, Cumberland, Hunterdon, Ocean, Salem, Sussex and Warren Counties {N.J.A.C 7:27-9}</p>	<p>For each fuel delivery received, the Permittee shall review the certificate of analysis from the oil distributor for fuel oil sulfur content. {N.J.A.C 7:27-8.13(a)}</p>	<p>In a permanent bound log book, the Permittee shall keep records of fuel oil sulfur content for each delivery received. All records must be maintained on site for a minimum of 5 years. {N.J.A.C 7:27-8.13(d)3}</p>	<p>Permittee shall report any non-compliance within three working days after the event in writing to the Regional Enforcement Office. {N.J.A.C 7:27-8.13(d)4}</p>
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